USAID TB CARE II Project

Core Annual Report Year 1
October 1, 2010- Sept. 30, 2011

University Research Co., LLC

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LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CLA	Canadian Lung Association
CLSI	Clinical and Laboratory Standards Institute
DOTS	Directly Observed Treatment Short-course
EHG	Euro Health Group
FANC	Focused Antenatal Care
HIV	Human Immunodeficiency Virus
IPC	Infection Prevention and Control
ISTC	International Standards for Tuberculosis Care
MCH	Maternal and Child Health
MDRTB	Multi Drug Resistance Tuberculosis
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NGO	Non Governmental Organization
NJGTBI	New Jersey Global Tuberculosis Institute
NTP	National Tuberculosis Program
PIH	Partners In Health
PMDT	Programmatic Management of Drug-resistant TB
PMTCT	Prevention of Mother to Child Transmission
QA	Quality Assurance
TAC	Technical Assistance Center
TAT	Turn-around Time
TB	Tuberculosis
URC	University Research Co., LLC
USAID	United States Agency for International Development
WHO	World Health Organization

1 EXECUTIVE SUMMARY

During the first year of project implementation, TB CARE II made significant progress in establishing the project workplan and rapidly beginning activities, which have already shown considerable success. The core management team worked with consortium partners to establish lines of communication and agree upon regular mechanism for ensuring efficient management of project funds and activities. The team worked quickly to develop and launch a project website which has achieved strong coverage among the TB community in high burden countries. Due to the late start of project activities, a number of activity plans were modified or extended into Year 2, following discussions with USAID. During the course of workplan development for Year 2, the TB CARE II management team held discussions with USAID and consortium members to examine the best ways for ensuring regular communication and information exchange among partners. Based on this and in order to identify and build on successes from Year 1 implementation, the project developed a revised management approach which will be circulated to all partners early in Year 2.

Activity achievements:

- A cross-sectional research study has been implemented in Bangladesh and Swaziland to identify causes and factors playing a role in patients delay to access TB services, following a desk review and the development of a conceptual framework for analysis of factors influencing patients delay.
- An online clinical case catalogue was developed, and includes 6 clinical cases of DR TB so far which were collected from Peru, Russia and Lesotho and circulated among a panel of leading DR TB experts which was established to support the activity.
- TB CARE II planned and developed a tool called "Community-Based Care For Drug-Resistant Tuberculosis – A Guide for Implementers" to provide practical guidance to National TB Managers and others on how to design, plan and implement a community-based program that increases access to essential care that is not hospital-based but is also of high quality.
- In year 1 TB CARE II supported 2 regional trainings on DR TB in Lesotho including health professionals (doctors, nurses, and pharmacists) from Swaziland, Democratic Republic of Congo, Zimbabwe and Zambia. TB CARE II also worked with partners from TB CARE I to map existing TB Technical Assistance Centers.
- A review and summary framework was developed providing actionable steps to assist high burden countries in developing/implementing key TB occupational safety policies and implementation plans based on health worker TB risk
- TB CARE II partners contributed to a joint TB CARE infection control meeting in July 2011 in The Hague to support the preparation of a guide to monitor TB incidence in health care workers. The meeting participants also developed consensus around a minimum package of TB IC interventions including 1) Active surveillance; 2) Rapid diagnosis; 3) Exposure control; and 4) Effective treatment. The components of the Core Package are captured by the acronym, F-A-S-T.
- Two tools focusing on the challenges of integration of TB/HIV in high burden countries were developed (the Focused Antenatal Care + "FANC +" tool and FANC fundal height measurement tape) and launched at the International Confederation of Midwives quadrennial congress.
- A self-directed rating tool was developed based on the WHO Guidelines for Ethical TB Treatment Care and Control addressing: access to care, patient centered care, information counseling and consent, adherence, drug susceptibility and treatment of drug resistant disease, health care worker's rights and obligations, isolation and legal interventions, and research. The tool will assist programs in identifying potential strengths and gaps in the ethical treatment of TB patients and is currently being tested in two countries.

2 OVERVIEW

2.1 Progress and Significant Achievements

The first months of the year were taken up with project start up activities and the development of activity plans, most of which were approved and underway by the second quarter. The third quarter saw a significant increase in activity as partners transitioned from project start up to active implementation on many of the core activities. Collaboration among partners and across the consortia towards the overall goals of TB CARE was evident, for example with planning underway for the joint TB IC tools meeting in July 2011 in The Hague and discussions on the Technical Assistance Centers, the case catalogue activity. One of the main outcomes of the meeting in the Hague in July was to develop consensus around a minimum package of TB IC interventions that would be effective, marketable, and implementable in various regions of the world. The key components of the package were agreed on, including 1) Active surveillance; 2) Rapid diagnosis; 3) Exposure control; and 4) Effective treatment. The components of the Core Package are captured by the acronym, F-A-S-T. This stands for "**F**ind cases **A**ctively, **S**eparate safely, and **T**reat effectively".

Community-based care for people with DRTB is still limited in many parts of the world, and particularly so in Africa, where increasing numbers of TB and DRTB cases are placing evermore needs on over-burdened health systems. To provide practical guidance to National TB Managers and others on how to design, plan and implement a community-based program that increases access to essential care that is not hospital-based but is also of high quality, TB CARE II planned and developed a tool called "Community-Based Care For Drug-Resistant Tuberculosis – A Guide for Implementers."

During year one, TB CARE II conducted a desk review to identify causes and factors playing a role in patients delay to access TB services, which led to the development of a conceptual framework for analysis of factors influencing patients delay. A cross-sectional research study was designed to be conducted in two countries (Bangladesh and Swaziland) and a study protocol for each country was prepared. At the end of the year, design and pilot testing of the instruments for data collection in the study's target populations were carried out and data collection begun.

In June, two new tools addressing TB screening, prompt diagnosis, and treatment in pregnant women were debuted by the TB CARE II team at the International Conference of Midwives, with sessions demonstrating their use as job aids and advocacy tools to integrate TB/HIV diagnosis, care, and, treatment into antenatal care.

2.2 Dissemination and Information Sharing

As most of the year was taken up by project start up or initiation of activities, fewer dissemination activities occurred in the first three quarters as lessons learned in many cases were not yet developed or validated. The project team set in motion several activities, however, to promote information sharing and uptake of key lessons.

One key activity that took place this year to assist with dissemination of project related information was the development and launch of the project website, http://urc.tbcare.net, and landing page http://tbcare.net (which directs to both the TB CARE II and TB CARE I sites). URC worked closely with BEA Enterprises to develop the concept and layout of the site, which is designed to provide easy access and regular interface by the project team who can upload and manage content directly. In this way, the project personnel have been able to rapidly and routinely update and refresh materials on the site.

The objective of the website is to provide 1) wide spread access to materials and documents developed through TB CARE II core and country activities; 2) inform the TB community of events and news of interest coming out of TB CARE II project work; 3) act as a library and resource site for TB related materials and information for implementers; 4) provide a platform for other web-linked activities supported through core or country activities. Although the site was relatively quick to get off the ground in year 1, we are still working on strategies to achieve the above objectives.

Content has steadily been added to the site and visits are increasing, as seen by the data below. The project teams are working to increase the number and types of materials that are distributed, incorporating insights from stakeholders regarding materials of interest and use for their work. We are also exploring developing links to the site from major TB informational resources like GHDOnline as well as building in links to project supported web activities such as the on line case book for MDR TB cases.

Table 1. Geographic distribution of visitors to the TB CARE II website

The visitors for June-September 2011 came from 267 cities in 72 countries. More than 80% of the visitors (outside the Americas) were new visitors.

For the year 2011 to date, traffic was very light through June (<100 visits per month), with increases to more than 100 visits per week in July and August, with noticeable increases during September and October. The following statistics provide information regarding use of the TB CARE II site during the 6/1-9/30/11 time period.

- 1,511 visits, 962 unique visitors, 3,537 page views, 3.5 minutes average time on site.
- 64% were new visitors; 36% were returning visitors.
- 44% came to the site from search engines, 30% from links on other sites, and 26% came directly (already had a link from somewhere).
- Other than the home page, the most popular page was TB CARE II: Bangladesh Request for Applications. Other popular pages were: the article on Grace Egos, announcements listing, and the page "About Us - the TB CARE II Project Team."
- New visitors came from:
    - Bangladesh—417 visits (72% of whom were new visitors) each for an average of 7 minutes
    - US—595 visits for 2 minutes;
    - Other countries including: Philippines, India, South Africa, Netherlands, UK, Canada, and Kenya.
- Trends: The weeks of 9/4, 9/11, and 9/18 were the 3 heaviest during the third quarter. The week of 9/11 accounted for 22% of the visits during this quarter.

2.3 Implementation status

At the end of the annual reporting period, the Year 1 core activities were at various stages of completion as follows:

#	Activity name	Lead partner	Status	Comments
1.1.3	Develop methods to evaluate the frequency and causes of delays	URC	Anticipated completion Q1 Year 2	Additional time is needed to complete data collection and develop report
1.1.4	Develop approaches for system wide quality improvement of TB services	URC	Anticipated completion Q2 Year 2	Additional time required to complete country level data collection
2.1.1	Map existing network of PMDT centers of excellence and strengthen existing centers	PIH		
2.1.2	Develop practical tools describing step by step implementation of community based PMDT	PIH		
2.1.3	Develop training SOPs and training tools for the care and support of MDR TB patients	PIH		
3.1.1	Develop and implement baseline survey tool to measure TB disease in health workers	URC	Complete	
3.1.4	Develop and implement workers' compensation policy and package	URC	Anticipated completion Q1 Year 2	Workshop scheduled for October IUATLD meeting
3.2.1	Develop tools/strategies for increasing TB screening, prompt diagnosis, and access to treatment at HIV services	PIH		
3.2.2	Develop and promote use of standard criteria for facility construction and renovation	PIH		
3.3.1	Training and mentoring on	PIH	Complete	

	environmental controls			
4.2.1	Develop and implement baseline survey tool to measure TB disease in health workers	Jhpiego	Anticipated completion Q1 Year 2	Primary activities are completed; additional time required to finish printing/ disseminating tools
7.2	Create tools to enable annual strategic planning review/evaluation and build capacity of NTP to carry out these activities	GTBI	Anticipated completion Q2 Year 2	
7.3	Explore national insurance programs where TB can be included to motivate/incentivize universal coverage	URC	Anticipated completion Q1 Year 2	Data collection is underway; additional time required to complete and develop report

2.4 Implementation challenges

The key implementation challenges that were experienced this year related to the time required to initiate project activities. Following the project award, the team worked quickly to develop work plans with partners, but in some cases final approvals for activity plans were not received until April. As a result, timelines had to be compressed and some activities were not completed as planned by the end of Year 1 (as described in the table in section 2.3). Overall, given the late start to most of the core activities, a significant portion of the work and allocated budget was be completed and spent in quarter 4, but progress was evident especially from early quarter 3 onwards.

3 UNIVERSAL ACCESS

3.1 Activity 1.1.3: Develop methods to evaluate the frequency and causes of delays

TB CARE	II
Project Code	1.1.3 Develop methods to evaluate the frequency and causes of delays
Project Year	1
Lead Partner	URC
Coalition Partners	WHO, Project HOPE
Other partners	NTPs, Other Service Delivery Partners
Total budget	$114,062
Project Start Date	April 1, 2011
Project End Date	September 30, 2011

Activity 1.1.3 is comprised of several steps. An initial phase was dedicated to conducting a detailed literature review from recognized sources to provide the required information to develop a framework of analysis. With the understanding gathered from the literature review, we developed detailed instruments for data collection (questionnaires) targeting patients undergoing TB treatment, community leaders working in the DOTS strategy, health providers and district managers.

A subsequent phase was to design a cross-sectional study to identify factors playing a major role in patient-related delays to accessing TB services in two countries: Bangladesh and Swaziland. The intention is to provide information from one country in both the South Asia and African regions. These regions were identified in the literature review as the ones with highest burden of TB delay. The aim of the study was to inform the development of an integrated set of recommendations for TB program managers and service providers regarding the appropriateness of different strategies for reducing patient factor delays in accessing diagnostic health services and treatment.

Study objectives:

- Determine causes of patient delays for TB diagnosis in countries
- Determine strategies applied by NTP in reducing patient delays
- Document role of community leaders in reducing patient delays
- Recommend methods and tools for reducing delays to initiation of TB treatment

3.1.1 Progress Against Expected Outcomes

Expected Outcomes:

- Analysis of the impact of patient factor delays to accessing and routinely using TB services.

During year one, a desk review was conducted to identify causes and factors playing a role in patients delay to access TB services. A conceptual framework for analysis of factors influencing patients delay was developed. A cross-sectional research study was designed to be conducted in two countries (Bangladesh and Swaziland) and a study protocol for each country was prepared. All due diligences necessary for country approval were followed and ethical approvals were sought for both studies. Design and pilot testing of the instruments for data collection in the study's target populations were carried out. Sample sizes were determined, data collectors were trained and instruments were translated to their countries respective native languages. Orientation sessions were conducted with government, NTP and NGO personnel.

- Recommendations for TB program and service providers regarding strategies for reducing patient factors delays in accessing TB diagnostic services and treatment.

URC requested an extension to analyze data collected and elaborate final recommendations to inform Activity 1.1.3 in Y2.

3.1.2 Activities and Results

The status of each activity component is as follow:

Activity 1. Analysis of factors resulting in patient delays: A desk review was conducted accessing databases from Medline and Cochrane libraries, as well as information from WHO, WB and other organizations' web pages. Searching criteria and keywords used in the search were: "TB patient delay", "TB diagnosis delay", "Time delay to TB treatment", "TB perception", "TB stigma", "lay population TB treatment preferences", "Gender perspective for TB access" and "TB awareness". Research articles were selected from countries in Southern Africa and South East Asia. We found 44 articles that met the previous requirements and were included for analysis.

A conceptual framework for analysis of TB delays was developed based upon information obtained from the international research community and WHO. The framework includes a classification of causes of TB delay with two main components Patient delay and Health System delay. We included several factors identified in the literature reviewed as playing a significant role in delaying patient access to TB services. We focused the analysis on factors influencing patients to delay seeking or accessing TB diagnosis and treatment. These factors were grouped in 1) Primary Patient Delay factors, which influence the time from symptom recognition to accessing the health care system, and 2) Patient Access Delay factors that play a role from when the patient seeks health care until the patient reaches a TB diagnosis. Primary patient delay factors considered include: demographic factors, socio-economic factors, health status, stigma, knowledge and attitude. Factors influencing Patient Access Delay analyzed in this review were: geographic factors, gender issues, financial barriers and health seeking behaviors.

A set of questionnaires was developed targeting four groups:

- Program coordinator Questionnaire: administered to Regional/District personnel within the National TB Program (TB and MDR-TB)
- Provider Questionnaire: administered to public and private health providers actively screening and treating TB patients/ suspects
- Community Leader Questionnaire: administered to the leader or manager of an active TB community organization (i.e., Community TB DOTS supporters, TB advocacy organization, or other)
- Patient Questionnaire: administered to patients currently on active treatment for TB.

Activity 2. Fact-finding visits with TB service providers in two regions: A research protocol was developed for each of the participating countries in this assessment Bangladesh and Swaziland respectively. The protocol included research questions, objectives, methodology and ethical considerations. Both protocols were translated into local languages and were submitted to their in country ethical review committees for review and approval. The protocols were also submitted to the internal (URC) IRB committee. Recommendations provided were addressed and the protocols were approved by both, in country and internal IRB committees and authorization was provided to conduct the studies in the district proposed.

URC along with NTP organized sharing meetings to inform stakeholders on the methods of the studies in both countries. Data collectors were selected and trained following specifications included in the research protocols. Sample sites were selected randomly in the selected district areas and patients in compliance with the inclusion criteria to be interviewed were also randomly selected.

At the end of the 4th quarter both countries were in the process of data collection.

Activity 3. Complete analysis and develop recommendations: An analysis plan for the country level data and outline for the final report and recommendations were developed. The final analysis will be completed in Q1 Y2.

3.1.3 Challenges

Delays were experienced at several points following the completion of the desk review and prior to initiation of data collection in both countries. In some cases, more time than anticipated was required either to secure approval to conduct the activity at the country level from the USAID mission, or to receive in-country IRRB approval, or to begin/ resume activities following in-country holidays (i.e., Eid). Some delays were also experienced related to the late start up of activities, tied to overall project initiation in year 1. However, work progressed steadily despite delays.

The activity also was unable to incorporate the participation of the WHO as intended, due to challenges related to formalizing WHO's partner agreement with the TB CARE II project. URC took on the additional effort to complete the desk review and protocols without the planned WHO support. Project HOPW was also intended as a partner on this project to support country level data collection; however, during the development of the desk review it was decided to conduct the studies in Bangladesh and Swaziland, which do not have Project HOPE field presence. URC took the lead in conducting the field work portion of the activity in these countries.

3.1.4 Next steps/ Implications for Year 2 Activities

The desktop review conducted shows that an emphasis on patients' perceptions and patient-centered approaches often results in improved access to health services and higher compliance with treatment. However, a significant gap remains in adapting and applying strategies which target the causes of patient related delays. Results from the studies conducted and recommendations provided to address gaps identified will be followed in year 2 with the TB Patients Rights Charter activity. In this activity the patient's perception of the quality of services available/accessible and the appropriate health seeking behavior related to TB will be analyzed. Commonly held ideas around the expected outcomes of seeking treatment for TB (belief that treatment may not result in a cure), the quality of services provided (belief that the provider will not deal with their case accurately or promptly), the quality of provider-patient interactions (belief that the provider will demonstrate rude, stigmatizing or other negative behaviors), and difficulty of accessing care (belief that services are not worth the effort involved to access them, in terms of time/distance/cost or other) are among the key determinants of whether a patient will access and adhere to treatment. These perceptions are informed by a number of factors including previous experience by the patient or close family/friends with the health service delivery system (both TB and non- TB services), lack of knowledge and awareness of TB disease among patients/ communities, negative provider attitudes, and structure of the TB service system (including proximity of services/accessibility). Many of these problems are compounded for women, migrants, and other vulnerable populations. In many countries, these factors result in diagnostic and treatment delays and reduced treatment adherence.

3.1.5 Dissemination of Lessons Learned

Once data analysis is finalized and recommendations provided URC will organize meeting sessions with government, NTP, NGO and significant stakeholders to disseminate findings and best practices recommended. URC will publish the final report in its TB CARE II web page and will facilitate future dissemination in peer review literature at the local and international level of the studies conducted during this activity.

3.2 Activity 1.1.4: Develop approaches for system wide quality improvement of TB services

TB CARE	II
Project Code	1.1.4 Develop approaches for system wide quality improvement of TB services
Project Year	1
Lead Partner	URC
Coalition Partners	Jhpiego, NJ GTBI
Other partners	
Total budgeted amount	$87,381
Project Start Date	
Project End Date	September 30, 2011

3.2.1 Progress Against Expected Outcomes

The activity is making progress towards the expected outcome of developing and testing a package of tools/approaches to improve the quality of TB services by investigating the causes of provider noncompliance to TB guidelines/standards and assessing the effectiveness of existing measures to improve quality of TB services. Based on the strong gap in provider compliance which has been highlighted in the existing literature, the activity team is working on assessing the factors influencing compliance in different TB service delivery settings and developing revised approaches to improve quality.

3.2.2 Activities and Results

The status of each activity is as follows:

Activity 1. Literature review: TB CARE II, including URC and GTBI, carried out a comprehensive literature review to identify issues affecting the quality of TB services delivered. The literature review examined both published and non-published articles. This activity was completed in July 2011.

The literature review outlined findings from studies addressing the factors linked to provider compliance with TB program guidelines and health care providers' ability to correctly diagnose and treat TB patients. The review also addressed interventions which have been undertaken to strengthen provider compliance in TB, including efforts to improve provider knowledge through training, job aids, and supervision as well as more comprehensive approaches such as Continuous Quality Improvement. The review demonstrated the gaps in TB provider compliance despite the existence of national guidelines and initiatives. Potential reasons for low compliance which were revealed include: limited provider awareness/knowledge of existing TB standards; harmful or stigmatizing provider attitudes toward TB patients; poor communication between providers and their patients; lack of human resources; poor monitoring and evaluation of implementation of guidelines; poor coordination among various levels of health care systems serving TB patients; lack of quality of process of care in TB facilities; and overprescribing non-TB drugs. Approaches to improving provider compliance with TB guidelines and their ability to correctly diagnose and treat TB patients that were outlined above include: training health care providers; improving supervision and monitoring; improving provider-client communication; ensuring adequate drug supplies; community mobilization; and PPM.

Activity 2. Develop/adapt a framework for quality improvement of TB services: This activity was revised to focus on development and implementation of compliance assessments to assess the levels of compliance with established evidence-based standards and guidelines. Survey information will provide specific information that will be used by TB CARE II and NTPs to better target interventions to improve provider compliance with the TB standards. The assessment will be carried out in Kenya, Zambia and Bangladesh in collaboration with Jhpiego and building from our

team's existing in-country presence to facilitate the completion of the assessment. Following the assessments, TB CARE II (URC with contributions from Jhpiego and GTBI) will develop an analysis report with findings.

The objectives of the compliance study are to:

- Generate information on the knowledge and skills of providers to provide "standard" TB services using data from provider interviews and a knowledge quiz;
- Measure the extent to which providers follow standards using data from patient-provider interaction observations, exit interviews, and information from records and registers;
- Generate information on the existence of systems for maintaining service delivery capacity using data from inventory of inputs and interviews with providers, NTP managers, and facility managers.
- Generate information on patients' understanding of treatment guidelines and perceptions of quality of care at provider and facility levels through patient exit interviews

At the end of year 1, the project team was in the process of initiating the country assessments in each of the countries. Approval was sought from the USAID missions to conduct the assessments in each country and is still pending. At the same time, the activity team leads from Jhpiego and URC are working on developing the country level protocols, tailoring the assessment tools to the country setting, and securing necessary approvals from the NTP and in country ethics committees, and the URC IRB, so that data collection can proceed quickly upon receipt of approval.

Activity 3: Following the compliance assessments, a manual for implementing targeted QI interventions to improve provider compliance will be developed. The manual will incorporate the assessment findings and outline a QI framework aimed at allowing TB program managers, especially at the local and service delivery levels, to identify quality gaps, identify the appropriate QI interventions and tools to target the gaps identified; and implement a package of improvement interventions. This activity has not yet begun. Anticipated completion is early January 2011.

3.2.3 Challenges

A key challenge experienced during the course of implementing this activity related to the time required to develop the tools and approaches to tackle issues of non-compliance and initiate pilot programs. Given the delayed start to year 1 activities and the time required to set up pilot programs, the TB CARE II team sought approval in August to modify the activity. The literature review highlighted the lack of information to support the development of successful methods to tackle non-compliance; therefore the activity was modified to support compliance assessments at the country level, both as a means of gathering more information from diverse TB settings to guide tool development, and to develop buy in and set the stage for implementation and adoption of quality improvement tools. Following the activity modification, the project teams have worked quickly to set up the in-country assessments, however, this has also required time to obtain the necessary approvals and move forward with tailored assessment protocols.

3.2.4 Next steps/ Implications for Year 2 Activities

Following the completion of the country level assessments and development of the manual on QI for TB programs, activities will be planned to support uptake and adoption though the country programs. Opportunities will be sought to incorporate the findings from the assessment in other core supported activities including the Patient's Charter activity or other avenues.

3.2.5 Dissemination of Lessons Learned

Following the completion of the assessment, stakeholders meetings will be held in each country to present the finding and present the QI manual. The assessment report and manual will also be published on the TB CARE II website and will be shared at other international partner forums.

4 PMDT

4.1 Activity 2.1.1: Map existing network of PMDT centers of excellence and strengthen existing centers

TB CARE	II
Project Code	2.1.1
Project Year	1
Lead Partner	PIH
Coalition Partners	
Other partners	
Total budgeted amount	$98,529
Project Start Date	
Project End Date	September 30, 2011

The aim of this core activity is to strengthen the three DR-TB treatment programs initially proposed as PMDT Technical Assistance Centers (TAC) and to add a TB CARE sponsored fellowship in PMDT to their training repertoire to develop PMDT experts. The three DR-TB treatment programs are existing PIH project sites in Russia, Peru, and Lesotho and already provide courses in the basics of clinical and programmatic management of DR-TB.

4.1.1 Progress Against Expected Outcomes

Expected outcome

1. Strengthen training capacity at existing PMDT centers of excellence.
2. Create a new mentored experience for experts: TB CARE Fellowship in PMDT

TB CARE II proposed three MDR-TB treatment programs to be PMDT Technical Assistance Centers (TAC): PIH Peru, Russia, and Lesotho. These programs have extensive experience in the scale-up of MDR-TB treatment, and work closely with the NTP in their respective countries and are dedicated to providing long-term technical accompaniment to strengthen national and regional DR TB programs. Each program has different strengths reflecting very different settings. In year 1 TB CARE II supported 2 regional trainings on DR TB in Lesotho. One was held in January including 8 health professionals from Swaziland, Democratic Republic of Congo, Zimbabwe and representatives from Médecins Sans Frontieres were trained. In June another 10 health professionals including doctors, nurses, and pharmacists from Zambia were trained on DR TB. In October, an additional 10 health professionals from Ghana will be trained on DR TB. Through the provision of salary support USAID, TB CARE II provided indirect support to build the capacity at the PIH Lesotho Center of Excellence to provide regional technical assistance to national TB programs on DR TB. The three Centers will be launched officially on www.tbta.co at the 42nd Union World Conference on Lung Health website. The website markets the Centers and the availability of national and regional training and technical assistance on DR TB. Interested parties can use the website to learn about the individual Centers and apply to available trainings. The website is managed by a number of users based in PIH Boston and in respective Centers who filter and respond to all requests for training. Fellowships in PMDT will begin in year 2. The curriculum for fellowships in PMDT are under development and using the website www.tbta.co interested parties can apply to upcoming fellowships in each of the Centers using an online application form.

4.1.2 Activities and Results

Activities

Activities in year 1:

1. Identify and map COEs/Technical Assistance Centers (TACs)
2. Provide clinical and programmatic training
3. Fellowship in PMDT

Results

1. PIH in collaboration KNCV (TB CARE I) conducted a mapping exercise to identify potential Center of Excellence. It will be presented at the 42nd Union World Conference on Lung Health 2011.
2. 3 trainings on DR TB took place in Lesotho in 2011. 28 health professionals from 5 countries were trained. The foundations to accelerate training in Lesotho and to begin training in Russia and Peru are in place.
3. The foundations to begin fellowships have been put in place and will begin in year 2.

4.1.3 Challenges

Limited funding to facilitate and host trainings have challenged implementing training and given that funding will remain stagnant scaling up efforts will remain restricted.

4.1.4 Next steps/ Implications for Year 2 Activities

Recommended next steps or details of any follow up core activities or transition to country activities.

- National and regional trainings will be hosted in the 3 Centers
- Fellowships in PMDT will take place at each of the 3 Centers.

4.1.5 Dissemination of Lessons Learned

Curriculums and other training materials for both the training and fellowships will be shared among Centers.

4.2 Activity 2.1.2: Develop practical tools describing step by step implementation of community based PMDT

TB CARE	II
Project Code	2.1.2
Project Year	1
Lead Partner	PIH
Coalition Partners	
Other partners	
Total budgeted amount	$166,086
Project Start Date	
Project End Date	September 30, 2011

4.2.1 Progress against expected outcomes

The expected outcome, "Developed tools for implementing community-based PMDT" has been achieved with the development of the "Community-Based Care for drug-Resistant TB – A Guide for Implementers". The editor in chief of the Guide was Kwonjune Seung, Deputy Director, TB CARE II. Initial drafts were written by PIH Lesotho and PIH Peru and the final draft was reviewed and edited by participants of the TB CARE II meeting on community-based care for DR-TB in Lesotho, September 2011 which was attended primarily by National TB program managers.

4.2.2 Activities and Results

Activities

1) A consultative meeting.
2) Develop a manual for the implementation of community-based drug-resistant TB programs.

Results

1) A consultative meeting was hosted to produce a final draft of the guide in Lesotho 7-9 September 2011. 27 representatives from National TB Programs primarily reviewed and edited the guide to produce a final version.
2) A preliminary version of the Guide will be launched on www.tbta.co at the 42nd Union World Conference on Lung Health 2011.

4.2.3 Challenges

A challenge in reaching consensus on the model to be promoted in the guide was the issues of compensation for the DR TB Supporters. Given the pressures on health systems as well as conflicting programmatic priorities investment in community-based programs has been neglected. To advance the discussion the group decided to rely on the dictionary definition of compensation, "something given or received as an equivalent for services" and as such decided that covering core costs to facilitate the accomplishment of tasks (transport, basic materials, etc.) did not fit the definition. It was also felt that unchallenging language will likely sustain the status quo to the disfavor and even exploitation of labor. In summary, when put to a vote it was agreed unanimously that DR TB Supporters should receive consistent remuneration to pay for the invaluable service they provide.

4.2.4 Next steps/ Implications for Year 2 Activities

In year 2 TB CARE II countries (Bangladesh and Malawi) will adapt versions of the guide for local use. The World Health Organization is investigating the possibility of endorsing the Guide, which will facilitate access to an even broader audience.

4.2.5 Dissemination of Lessons Learned

The Guide will be launched at the 42nd Union World Conference on Lung Health 2011. A preliminary version of the guide is available online at www.tbta.co and links will be established between this website TB CARE I and II websites and other stakeholders to increase its availability and usability. At the conference a preliminary version of the Guide will be available in CD and pen drive format and conference booths and various other forums including satellites and meetings will be used to disseminate it broadly.

4.3 Activity 2.1.3: Develop training SOPs and training tools for the care and support of MDR TB patients

TB CARE	II
Project Code	2.1.3
Project Year	1
Lead Partner	PIH
Coalition Partners	URC, PH, NJ, CLA, Dartmouth
Other partners	
Total budgeted amount	$106,189
Project Start Date	
Project End Date	September 30, 2011

MDR-TB treatment, particularly the management of side effects, is unfamiliar to many clinicians. There are several excellent MDR-TB guidelines already in existence however TB CARE II recognized a gap in training material for clinicians and developed an online case study series. Additionally to assist to create national guidelines based on the 3rd edition of WHO Guidelines on MDR TB an online template would be created entitled "TB CARE template for country guidelines for MDR TB".

4.3.1 Progress Against Expected Outcomes

Expected Outcomes

1. Create an online case catalogue focused on clinical management of MDR TB, including management of side effects
2. Create "The TB CARE template for country guidelines for MDR TB."

Progress

1. The online MDR-TB case catalogue is available at www.tbta.co
2. MDR-TB guideline/country template will be finalized in December per extension.

4.3.2 Activities and Results

Activities

1. Develop SOPs for managing DR-TB cases
2. Moderate on-line discussions for DR-TB providers
3. Develop template for country DR-TB guidelines

Results

- A panel of TB experts worked on 6 clinical cases of DR TB over the course of the year. The moderator collected cases from Peru, Russia and Lesotho, circulated the cases among the experts, collected the responses which were then summarized by the editor in chief and returned to the expert group. Initially experts worked offline to create the beginnings of a catalogue of cases and are now working online. The case catalogue is available at www.tbta.co.
- A draft version of the template is available and is to be finalized in December 2011.

4.3.3 Challenges

During the first year of implementation the main challenge was in consolidating and accelerating the pace of implementation. Now that the vision for the activity is clear to all involved and that the experts have more experience in responding to cases the expectation is that the pace of implementation will increase in year 2.

4.3.4 Next steps/ Implications for Year 2 Activities

The clinical case catalogue and discussions will continue online at www.tbta.co and some cases will be adapted in a self-learning format with guided questions. Additional online materials will be created for clinical and program managers, which will consist of talks presented through a webinar system.

4.3.5 Dissemination of Lessons Learned

A conference call was held with the expert panel to discuss year 1 activities. A subsequent work plan for year 2 will be circulated to all experts, based on lessons learned from year 1. Feedback included providing more patient information (e.g. socio economic information) and the desire for people to work in groups.

5 INFECTION CONTROL

5.1 Activity 3.1.1: Develop and implement baseline survey tool to measure TB disease in health workers

TB CARE	I and II
Project Title	Develop tools to measure TB incidence and prevalence in health care workers
Project Code	C3.1.1 and C3.1.2 integrated
Project Year	APA1
Lead Partner	WHO
Coalition Partners	KNCV/FHI/MSH/UNION
Other partners	TB CARE II; Ministries of Health of several countries (including NTPs and occupational health specialists); CDC; TB-IC Core subWG members (as resource persons), NGOs with experience in HCW screening
Budgeted amount – TB CARE II	$38,280
Project Start Date	March 2011
Project End Date	September 2011 (with in-country activities in APA2)

In year 1, WHO (TB CARE I) led the preparation of a guide to monitor TB incidence in health care workers (HCW) that would provide countries with methodology to accurately report their TB notification rate among HCW's and use this information to assess the effectiveness of TB infection control (IC) implementation. TB CARE II partners participated in a meeting organized by TB CARE I in The Hague in July 2011 to discuss experiences with measuring TB among HCW's, identify factors that could impede the implementation of a HCW TB notification system and review collected tools.

5.1.1 Progress Against Expected Outcomes

Progress will be reported by TB CARE I.

5.1.2 Activities and Results

TB CARE II partners participated in the 2-day consultative meeting in The Hague July 13-14, 2011. On behalf of TB CARE II, the meeting was attended by Edward Nardell (PIH), Maria Insua (URC), Samson Haumba (URC), Stacie Stender (Jhpiego), Karen McClure (CLSI), Alex Trusov (PH), Nisha Ahamed (NJGTBI), and Lee Reichman (NJGTBI).

5.1.3 Challenges

WHO and KNCV led this activity under the auspices of TB CARE I. TB CARE II partners did not experience any challenges in their role.

5.1.4 Next steps/ Implications for Year 2 Activities

In year 2, TB CARE I will test the guide in 2-3 selected countries, which could result in modification and/or validation of the draft guide. In addition to assisting countries to measure and monitor the impact of their TB IC implementation, the field testing of the guide will enable WHO to validate a tool for collecting data on TB among HCW's from different countries, in a standardized manner. TB CARE II partners will be involved if they are already working within one of the countries where field testing will be conducted.

5.1.5 Dissemination of Lessons Learned

During year 1, efforts were focused on developing a draft guide. TB CARE I will disseminate lessons learned after the field-testing exercise, modification and/or validation of the guide and development of the data collection tool by WHO.

5.2 Activity 3.1.4: Develop and implement workers' compensation policy and package

TB CARE	II
Project Code	3.1.4
Project Year	1
Lead Partner	URC
Coalition Partners	WHO
Other partners	
Total budgeted amount	$54,282
Project Start Date	February 1, 2011
Project End Date	September 30, 2011

5.2.1 Progress Against Expected Outcomes

The TB CARE II team made steady progress towards the expected outcome of developing/ implementing a workers' compensation policy and package during this year. The development of the draft framework on occupational safety was completed following the background analysis and a stakeholder's meeting was planned to disseminate key aspects of the proposed framework to partners and policy makers in high burden countries, in order to refine the framework and support consensus building for adoption at the country level.

5.2.2 Activities and Results

Activity 1. Develop a framework: As a first step a synthesis report has been developed following a desk review focused on the literature published from the high TB and HIV burden countries in Southern Africa, South Asia and Central Asia. The review presents the current information on TB risk among healthcare workers; summary of existing OSH policies/guidelines by the international agencies such as WHO and ILO; an examination of the strategies that are being used in healthcare-related work settings to mitigate the risk of occupationally-acquired TB including use of infection control plans (including implementation at the operational level); and existing legislative frameworks/ policies around occupational safety and worker's compensation for healthcare professionals and health center staff. The existing literature highlighted a number of key challenges to implementing OSH and infection control measures in low resource, high TB burden settings, including the high prevalence of TB and HIV; the lack of human resources (doctors, nurses, technicians) and high levels of absenteeism/ morbidity and mortality related to TB/HIV; lack of resources including TB drugs, lab tests, infrastructure in health facilities/labs and required equipments for infection control; the lack of coordination between the various agencies; and the unavailability of occupational health and safety services for many workers whether in the governmental or private sector. The review found very few published examinations or examples of worker's compensation packages for health workers in developing countries. The information was used to develop a summary framework providing actionable steps to assist high burden countries in developing/implementing key TB occupational safety policies, implementation plans and minimum worker's compensation protocols.

Activity 2. Conduct occupational safety workshop: Based on the compressed timeline and schedules of stakeholders, a decision was made to hold the workshop during the Lille IUATLD conference in October. By the end of the reporting year, preparations were underway for the workshop, including setting the venue, agenda, presenters and presentations, and disseminating invitations.

5.2.3 Challenges

The resources for this activity were small, and the scope was necessarily modest. Introducing occupational health and safety programs for TB providers in resource-limited settings is a challenging prospect; however the activity scope focused on raising awareness and building consensus around the need for moving beyond infection control and also addressing aspects of occupational safety for health workers at high risk of contracting TB. A key challenge will be to

move beyond awareness into implementation. The framework developed however is important to help support discussions and planning on this issue.

Due to difficulties related to formalizing WHO's partner agreement with the TB CARE II project, the activity also had challenges in incorporating the participation of WHO as planned.

5.2.4 Next steps/ Implications for Year 2 Activities

The provision of occupational safety services for TB providers is an important issue that will not be quickly or easily taken up by high burden TB countries. The TB CARE II team will continue to support consensus building and discussions with policy makers and implementers on this issue through the country level programs and in international forums.

5.2.5 Dissemination of Lessons Learned

Following the occupational safety workshop at the IUATLD conference, the framework will be revised based on the feedback from participants and circulated along with the background documents to the participants and the wider TB community through the TB CARE II website and other information sharing mechanisms.

5.3 Activity 3.2.1: Develop and scale-up minimum TB IC package

TB CARE	II
Project Code	3.2.1
Project Year	1
Lead Partner	PIH
Coalition Partners	URC, PH, Jhpiego, CLA, NJ GTBI
Other partners	TB CARE I
Total budgeted amount	$84,603
Project Start Date	February 1, 2011
Project End Date	September 30, 2011

In the 41st International Union against Tuberculosis and Lung Disease meeting in Berlin, Germany (11-15 November 2010), TB CARE I and II representatives came to a consensus to develop a Core Package of interventions aimed to facilitate implementation of global TB IC efforts. Led by Dr. Edward Nardell (PIH), a meeting was proposed with experts from TB CARE I and II partner organizations, the Stop TB - TB IC sub working-group on infection control, USG and implementers from various countries with high TB burdens, to select and define a sub-set of interventions that would be readily understood at the programmatic and institutional implementation level and complemented by the WHO TB IC Policy.

5.3.1 Progress Against Expected Outcomes

The aim of this core activity was to develop and refine, through consensus, a minimum package of TB IC interventions that would be effective, marketable, and implementable in various regions of the world. This aim was achieved during the consultative meeting held July 11-12, 2011 in The Hague with the development of the key components of the package and a meaningful message with which it could be marketed and disseminated.
The core components of the package are:

1. Active surveillance
2. Rapid diagnosis
3. Exposure control
4. Effective treatment

The components of the Core Package are captured by the acronym, F-A-S-T. This stands for "**F**ind cases **A**ctively, **S**eparate safely, and **T**reat effectively".
The implementation strategy was intended to be developed in year 2.
Treatment is not usually highlighted as an infection control core activity, usually receiving emphasis as an aspect of DOTS expansion or other TB area, but there is strong evidence that prompt diagnosis and effective treatment is by far the most important activity for preventing the spread of TB.

5.3.2 Activities and Results

The main activity for year 1 was to convene a consensus building workshop. A 2-day workshop was held July 11-12, 2011 in The Hague, preceding the 2-day meeting organized by WHO to discuss the HCW TB incidence guide. There were twenty-six participants representing twenty organizations.
The July meeting was instrumental in developing the concept and confirmed the need for a simplified message to be marketed to health care workers incorporating treatment of TB as a prevention measure.

5.3.3 Challenges

Given the breadth and depth of an area such as infection control, reaching consensus on a minimum package was a challenge. The minimum package aims to be comprised of simple, core messages that health care workers can easily remember and apply in their work place, but does not replace broader policies and strategies, which are still necessary. There were other aspects of infection control programming and advocacy such as counseling and testing or laboratory diagnosis that vied for inclusion. The acronym **FAST** and the core concepts may yet evolve during the marketing and campaign development phase prior to field testing to reflect more nuanced phrasing.

Representatives at the consultative meeting also felt that the core concepts should be workable in settings with limited diagnostic capacity given that it will take some time for GeneXpert technology to be widely available.

Due to limited funding, it is also challenging to field test the core package and identify a pilot site.

During the meeting, the TB CARE team also experienced the untimely passing of Grace Egos, a laboratory IC expert.

5.3.4 Next steps/ Implications for Year 2 Activities

In year 2, a marketing and messaging group will be identified to further develop the acronym, develop materials, and test them. Zambia has been identified as one pilot site in collaboration with KNCV. A second pilot site has yet to be identified.

5.3.5 Dissemination of Lessons Learned

The core package is at the concept phase after this first year of activity. The concept will be introduced to a larger audience at the 42nd Annual Union World Conference on Lung Health by Dr. Edward Nardell in a presentation titled: "FAST - TB IC Working Group". In year 2 the concept will be developed into educational products, a promotional campaign, and will be field tested. Lessons learned from field testing will be incorporated into the development of the core package and will be shared with TB CARE partners and other stakeholders but the exact manner in which this will be done still needs to be decided.

5.4 Activity 3.2.2: Develop and promote use of standard criteria for facility construction and renovation

TB CARE	II
Project Code	3.2.2
Project Year	1
Lead Partner	PIH
Coalition Partners	
Other partners	
Total budgeted amount	$65,257
Project Start Date	February 1, 2011
Project End Date	September 30, 2011

This core activity is centered on a resource in progress called the "Case Book", which grew out of the Stop TB sub-working group on TB infection control, started with funding under TBCAP and is now being expanded upon through TB CARE. This project has been based at PIH/Harvard under the supervision of Paul Jensen (CDC) and Ed Nardell (PIH), with input from other engineers and architects and has linkages with the Harvard School of Public Health (HSPH) course "Building Design and Engineering Approaches to Airborne Infection Control" which is conducted annually in Boston.

The aim of this project is to create informed architectural designs of healthcare facilities that positively impact public health. The Case Book is not intended to promote a standard design but to assist designers with understanding the various factors that need to be considered, especially those that are unique to their site and then provide a tool to assist in customizing the design for those needs.

The Case Book and accompanying web-based tool needed additional content and marketing to make its availability more generally known. The existing material can be viewed at http://www.massdesigngroup.org/framework. It is a resource that will expand over time as more cases are added.

5.4.1 Progress Against Expected Outcomes

In year 1 the project aimed to develop the Case Book further with additional cases from a series of field visits to sites with good examples of new construction or successful renovations that would serve as models for other projects.

The MASS Design Group Case Book team identified several sites in Lesotho, South Africa, Ethiopia, Togo and Burkina Faso to visit from September 18 - October 11, 2011. The soon-to-be-renovated hospital site in Lesotho is located in a mountainous, difficult to reach location with snowfall in the wintertime, making low cost options like passive ventilation a challenge. The team would be collecting data about how these challenges were taken into account in the new design. In South Africa the team would collect data about sites whose construction was funded by the GFATM and designed by the Council for Scientific and Industrial Research (CSIR) with TB infection control in mind, as were the two renovated sites in Ethiopia which would be visited. The Togolese sites were the oldest buildings in the selection and presented a renovation challenge given the limited resources available and typical design used by the US military that built them. The site in Burkina Faso represented an innovate design for low cost passive ventilation adapted for dry climates where windstorms occur while still enhancing air flow for airborne infection control purposes.

Unfortunately, this outcome was not reached. The MASS Design team required an extension beyond the first year's timeframe due to scheduling conflicts for some of their members who were already committed to other projects. Once an itinerary was developed with all the organizations and sites to be visited, the trip did not occur due to the difficulty in getting USAID Washington and Mission approval for the travel itinerary in the given timeframe, explained further in section 3.3.3.

5.4.2 Activities and Results

This project had two main activities: updating the Case Book and marketing it. Neither of these activities was accomplished as the data collection visits were not undertaken. More details are provided in section 3.3.3.

5.4.3 Challenges

The Case Book data collection visits itinerary was submitted to the AOTR on August 19 once final dates had been established with the various sites to be visited. On September 12, the AOTR expressed concerns about Togo and Burkina Faso due a limited USAID presence in those countries and as they were neither TB CARE I or II or USAID priority countries for TB. The request was resubmitted without those two countries and concurrence received on September 14. However this was not enough time to arrange approval with the USAID missions in the remaining three countries by the team's departure date of September 17.

This experience and its unsuccessful outcome clearly highlight the need for PIH and its partners to involve USAID earlier in the process and ensure that there is a common understanding of the project at all levels so that the Case Book can be developed further as intended. The Case Book is not directly linked to TB CARE field support activities and sites of interest that will provide good examples could be located in non-TB CARE or USAID priority countries. By working together with our partners and USAID, we are sure that this activity can be carried out successfully and the end product will fill a current knowledge gap in the area of building design for airborne infection control, particularly in resource limited settings that are faced with a high TB burden.

5.4.4 Next steps/ Implications for Year 2 Activities

The Case Book is a long-term project of the MASS Design Group as cases can be continually added. In year 2, with the involvement of TB CARE partners and USAID in the selection of sites, the MASS Design Group team will carry out data collection and aim to develop 6 new cases. The data will be presented as cases but will also further develop the web-based decision tree that will assist designers and engineers with their own plans as well. The cases can be accessed through the MASS Design Group's website, but linkages will also be made with other websites like GHDonline, the TB CARE I and II sites, WHO, among others, to promote the Case Book.

5.4.5 Dissemination of Lessons Learned

This activity is specifically geared towards dissemination of lessons learned through the development of the Case Book which presents examples of new construction and renovation of facilities for enhanced airborne infection control, especially TB. This resource will be shared with the public health community through various websites and with colleagues attending the HSPH "Building Design and Engineering Approaches for Airborne Infection Control". The team will also work on identifying other platforms in year 2.

5.5 Activity 3.3.1: Training and mentoring on environmental controls

TB CARE	II
Project Code	3.3.1
Project Year	1
Lead Partner	PIH
Coalition Partners	
Other partners	
Total budgeted amount	$87,310
Project Start Date	February 1, 2011
Project End Date	September 30, 2011

To address the global shortage of architects, engineers, and general IC specialists trained in the technical aspects of design and engineering to provide expert consultation, TB CARE II planned to sponsor two types of capacity building opportunities for public health professionals in year 1:

1. The HSPH Course "Building Design and Engineering Approaches to Airborne Infection Control" from August 1-12, 2011 in Boston, MA - the "AIC" course
2. Mentored site visits to be carried out by Ed Nardell or Paul Jensen

5.5.1 Progress Against Expected Outcomes

The project outcome is trained and mentored experts on environmental controls and this was achieved.

For the HSPH AIC course, the selection committee ranked the eligible applicants and selected 7 professionals for TB CARE sponsorship. All 7 participants received a ranking of 4 or 5 points out of 5 possible points. The participants included two laboratory scientists from Zambia and Zimbabwe, two medical doctors in leadership positions working in Namibia and Nigeria, an engineer from Brazil, the 3 "I" Officer from the national TB program in Malawi, and an environmental health practitioner from South Africa. All 7 participants completed the course successfully.

The mentored site visits were intended to offer opportunities to invest further in professionals that previously attended the HSPH AIC course expressing a commitment and availability to function as international consultants. Given the late start to the activities in year 1 and prior commitments of Ed Nardell and Paul Jensen, the best opportunity that arose to offer mentorship were the TB IC meetings that were held in The Hague from July 11-14, 2011. Two consultants were identified and TB CARE II sponsored their attendance at these meetings bringing together TB experts from around the world.

5.5.2 Activities and Results

The two main activities were to train regional/local experts and mentor experts. The former was successfully achieved through sponsorship of 7 professionals to the HSPH course. The latter was achieved with a modification of the initial activity proposed as explained in section 5.5.2.

This core activity also aimed to create a clearinghouse mechanism for international consultants where participants of the HSPH course expressing interest in working internationally could be registered and linked with projects requesting technical assistance. After 4 years of offering the AIC course, nearly 150 people have been trained, many of whom could offer assistance to programs locally or internationally. This activity was deferred to year 2 and requires further discussion and refinement.

5.5.3 Challenges

Evaluating the impact of the course is a major challenge. One method could involve a case-based record of projects that can be attributed directly to the course. While there is anecdotal evidence that a number of facilities have been designed, built or renovated as a direct result of the principles learned in the course, there is no systematic way to capture or analyze these outcomes currently and resources would be required to keep it updated.

Another challenge is developing IC specialists that are available for international consulting. In many cases, trainees are employed by a health ministry or government TB program and the focus of their work is local. Each year, the graduates of the course are asked to fill in a questionnaire about their interest and availability as consultants. The course organizers have unique access to this cohort of trained professionals. The clearinghouse mechanism is intended to bridge the gap for those committed and available to be international consultants with programs in need of expertise. The exact mechanism of the clearinghouse needs to be developed and cross-listing with WHO's TB Team is a possibility to be explored and will be discussed further in year 2.

5.5.4 Next steps/ Implications for Year 2 Activities

These activities will be continued in year 2. Additional professionals will be sponsored to attend the HSPH AIC Course and with a full year, there is a greater amount of time to promote the course in TB CARE I and II countries and receive recommendations of applicants for consideration. The team plans to track a number of participants of the AIC course and develop an evaluation mechanism to measure impact.

Every effort will be made to identify candidates among those that have taken the AIC course in past years and suitable sites to be used as a mentoring experience. The clearinghouse is closely linked with the AIC course as well and needs to be continued through the life of the project. The mechanism will be developed in year 2 including a marketing plan with linkages to other suitable platforms, which could include TB Team as previously mentioned.

5.5.5 Dissemination of Lessons Learned

In year 1, the team has not developed a mechanism for capturing or analyzing the impact of the AIC course and the mentored visits on global capacity in TB infection control. With a full year to develop these activities further, it is anticipated that at the end of the next year's programming there will many lessons learned to share.

6 TB/HIV

6.1 Activity 4.2.1: Develop tools/strategies for increasing TB screening, prompt diagnosis, and access to treatment at HIV services

TB CARE	II
Project Code	4.2.1
Project Year	1
Lead Partner	Jhpiego
Coalition Partners	URC, PH, EHG, WHO, CLA
Other partners	
Total budgeted amount	$158,993
Project Start Date	February 1, 2011
Project End Date	September 30, 2011

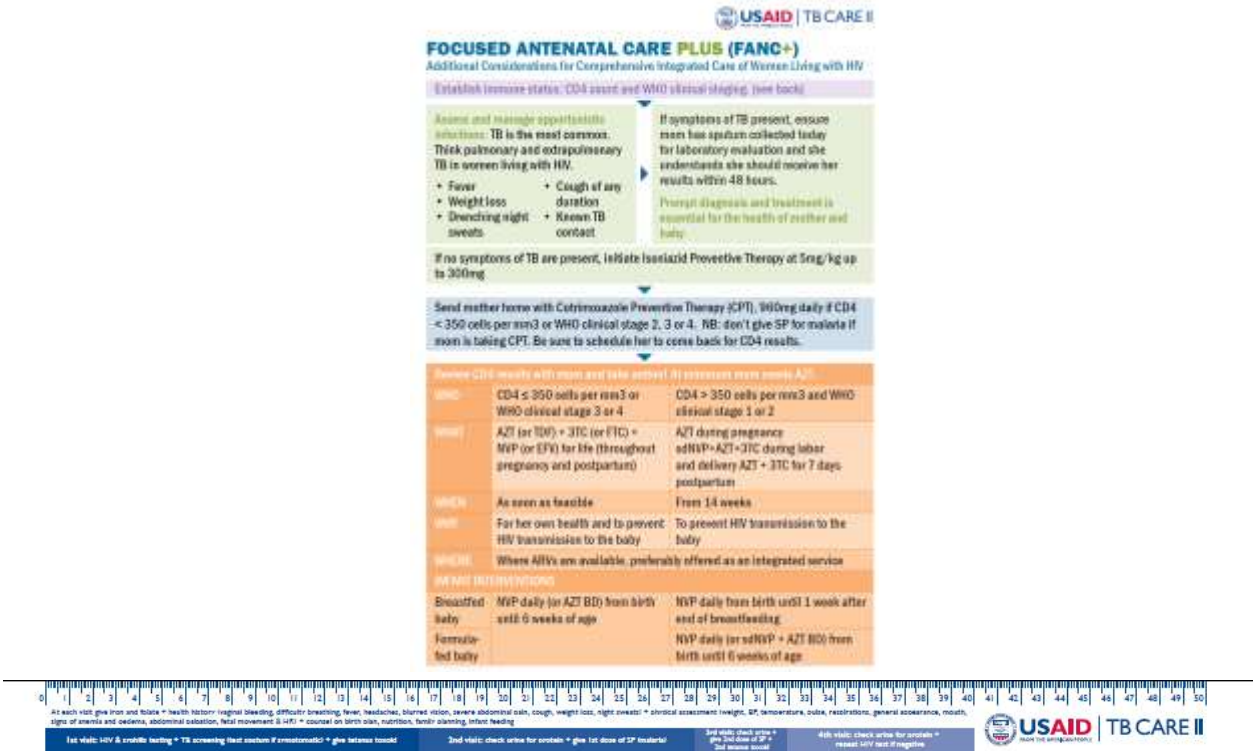
6.1.1 Progress Against Expected Outcomes

Expected outcomes met: *Increased provider awareness of strategies to address TB and HIV as leading causes of morbidity and mortality in women and their families in Eastern and Southern Africa.*

6.1.2 Activities and Results

Activity 1. Development of tools (*completed June 2011)*

In consultation with URC, Partners In Health, EHG, MCHIP, and the World Health Organization Stop TB Department, Jhpiego developed and disseminated two tools that address TB screening, prompt diagnosis, and treatment in pregnant women. The Focused Antenatal Care + (FANC +) tool and FANC fundal height measurement tape were both launched at the International Confederation of Midwives quadrennial congress. Both tools focus on challenges of integration of TB/HIV in countries with high burdens of both diseases. A training package was not developed due to the lack of perceived need at country and global level (IMAI-IMPAC and FANC training packages already exist).



Item 1: Tools developed: FANC+ cover page, FANC fundal height measurement tape

Activity 2. Dissemination of integrated TB/HIV and MNCH tools to MNCH community *(completed June 2011 with further dissemination through October 2011)*

The two job aids developed under Activity 1 were launched and disseminated at the International Confederation of Midwives 29th Triennial Congress in Durban, South Africa 19-23 June 2011. The tools were distributed to 40 participants from 8 countries (Ethiopia, Indonesia, Kenya, Liberia, South Africa, Swaziland, Tanzania, USA) representing 12 different governments/organizations at the TB/HIV technical workshop titled "Midwives Improving Health Outcomes: Effective TB & HIV Interventions". Jhpiego also distributed the tools and other TB/HIV materials throughout the conference from 19-23 June at a booth where the TB/HIV Technical Advisor spent a substantial amount of time communicating with conference participants.

The program also liaised with the USAID Global Health funded Maternal Child Health Integrated Program (MCHIP) to reach out to MCHIP country programs to determine interest in distributing them Ministries of Health and utilizing them in MCHIP programs. Thus far three countries have expressed interest, including Kenya, Tanzania, and Ethiopia; over 4000 copies of the FANC+ and over 3000 copies of the tape measure have been printed for distribution.

Additionally, the TB/HIV tools will be made available during the 42nd Union World Conference on Lung Health on 25 October during the Stop TB Partnership Symposium "Meeting the unmet needs of women and children for TB prevention, diagnosis and care: expanding our horizons".

Item 2: Launch of the International Confederation of Midwives 29th Triennial Congress in Durban, South Africa, June 19, 2011

Activity 3. Skill building of healthcare providers

(completed June 2011 for 90 participants with continued discussions to source funding for development of TB/HIV clinical competency among MNCH providers)

On 8 June, Jhpiego facilitated a skills building session for the Southern African HIV Clinicians Society titled "Nurses & the ART of Comprehensive HIV/TB Care" at the 5th Southern African AIDS Conference in Durban. Adult, pediatric, and pregnancy HIV/TB case studies were presented by colleagues Francis Prinsloo of TB/HIV Care Association, Dr. Liezl Smit of South2South, and Marieta Booysen of WRHI, respectively. The overall objective of the session was: "to provide

Item 3: Standing room only at the Southern African HIV Clinician Society skills building session, June 8 2011

Professional Nurses with the essential skills to initiate and manage pregnant women, children, and adults on antiretroviral therapy (ART) and to diagnose and manage common opportunistic illnesses, with an emphasis on TB." There were approximately 90 participants, of whom 35 submitted information on their TB and HIV learning needs and contact details. The ANC - TB/HIV integration tools were not finalized in time for dissemination at the conference.

Discussions continue with MCHIP colleagues to determine how existing presence and resources can be leveraged to pilot and evaluate the utility of the two tools developed. The budget for the core activity did not allow for further planning of workshops to target MNCH providers for TB/HIV integration.

Activity 4. Regular dissemination of TB/HIV information to 'other' interest groups *(completed at end of project year)*

Up-to-date information on TB and HIV was posted to pre-service nursing and midwifery education email groups established by the TB/HIV Technical Advisor as well as the Implementing Best Practices (IBP) Knowledge Gateway. Approval to post on Global Alliance for Nursing and Midwifery (GANM) was sought, without success.

On 6 January, a TB/HIV in women technical update was led by Jhpiego's TB/HIV Technical Advisor to 70 participants, including technical advisor and practitioners within MCHIP as well as technical leadership from other partner organizations. Four presenters discussed the global epidemiology of TB & HIV, TB & HIV in pregnancy, key elements of TB/HIV integration, and treating the HIV positive pregnant woman for her own health.

The effectiveness of the measuring tape launched at the ICM Congress was evaluated through post-activity survey in July-August 2011. The survey was answered by 18 of the 35 participants to whom it was sent. While none of the respondents reported integrating TB & HIV care immediately following the workshop, those that responded stated that they consider a tool like the measuring tape useful for themselves or the midwives they support to remind them to integrate TB & HIV during routine care. Recommendations for improving the tool included: adding tetanus as a key message, adaptation for other ANC services such as FP, anemia prevention, BP/CR, and monitoring advanced fetal growth. The elements of the tool found to be most useful was the comprehensive information and the routine use of a measuring tape.

Monthly updates were not established due to lack of established audience for dissemination, however in September 2011, Jhpiego created email groups by country with names individuals who participated in the skills building session, tool dissemination session, and who visited the Jhpiego booth during the ICM congress. TB/HIV information had not been disseminated yet to the email group by the end of the project year, however this email group will be used for communication in future.

6.1.3 Challenges

The main challenges with regards to implementing this TB/HIV core activity were related to the delayed start up of the project, as well as barriers to communication among TB CARE II partners and between all TB CARE stakeholders. Input was welcomed and requested from partners but some partners listed as collaborators on the activities did not provide feedback.

6.1.4 Next steps/ Implications for Year 2 Activities

Jhpiego, as lead partner on this activity, recommends that the dissemination of the two tools developed under this core activity in PY1 continue. Several individuals, organizations, and government representatives have expressed interest in adapting the FANC+ and measuring tape tools, and this will require close follow-up at country level. As the activity was not funded for PY2, the provision of support to other countries will be dependent upon sourcing alternative funding. Should funding support for skills building in TB/HIV and MNCH be available in the future, additional skills building and work with other interest groups would be beneficial to continue information sharing and collaboration with leading clinicians

6.1.5 Dissemination of Lessons Learned

Lessons learned will be shared with USAID and TB CARE I & II consortiums during the (semi) annual meeting in February 2012.

7 HEALTH SYSTEM STRENGTHENING

7.1 Activity 7.2.2: Create tools to enable annual strategic planning review/evaluation and build capacity of NTP to carry out these activities

TB CARE	II
Project Code	7.2.2 Create tools to enable annual strategic planning review/evaluation and build capacity of NTP to carry out these activities
Project Year	
Lead Partner	GTBI/NJ
Coalition Partners	Project HOPE, WHO
Other partners	
Total budgeted amount	$85,579
Project Start Date	
Project End Date	September 30, 2011

7.1.1 Progress Against Expected Outcomes

- Develop an ethics tool based on the WHO guidance document

An instrument for the *Assessment of Ethical TB Patient Management* has been developed and reviewed internally and by representatives of URC, USAID and WHO.

- Coordinate pilot testing the tool in four countries in Southern Africa

Approval from USAID and country missions was received for Mozambique and Namibia. Approval was not forthcoming for Malawi and South Africa at this time.

- Reported on use of the ethics tool and findings to drive future project outcomes

The pilot tests were ongoing at the end of the reporting period; the report will be developed upon completion of the pilots.

7.1.2 Activities and Results

Activity 1: Desk audit

Desk audits were completed that consisted of looking at existing data on the background surveillance data of 3 countries in Southern Africa- Malawi, Mozambique and Namibia. Additional information on partnerships and quality of care was also reviewed with an eye towards characterizing the environment around care for patient with TB-HIV and drug-resistant TB. The fourth country planned originally to be part of the project, South Africa, was unable to contribute data due to constraints on the part of the Project HOPE staff in that country.

Activity 2: Development of Tool for the Assessment of Ethical TB Patient Management

The World Health Organisation (WHO) released Guidelines for Ethical TB Treatment Care and Control. This guidance is meant to address all dilemmas related to the rights of TB patients, the community, TB programmes, and health care workers in the management of TB patients. Based on this document, a self-directed rating tool was developed addressing the following topics: access to care, patient centered care, information counseling and consent, adherence, drug susceptibility and treatment of drug resistant disease, health care worker's rights and obligations, isolation and legal interventions, and research. The tool will assist programmes in identifying potential strengths and

gaps in the ethical treatment of TB patients. Supplementary information providing criteria for rating these areas and instructions on how to use the tool has also been included. The information provided is a brief summary on each question, which addresses the consensus by the authoring committee on the appropriate ethical stance that should be taken. That information in conjunction with gaps identified in the tool can indicate where further policy changes, internal and external resource allocation, and research may be needed to meet the identified needs on ethics. (Instrument and guidance document is attached). The tool has been translated into Portuguese for use in Mozambique; an English version will be utilized in Namibia.

Activity 3: Implementation of the ethics tool

The tool will be piloted in two of the four proposed countries. Project HOPE on-the-ground staff along with USAID mission staff in Namibia and Mozambique will work closely with NTP to identify key staff to use the tool as designed, observe country staff as they use the tool, and then gather feedback on the tool. Prior to piloting, a GTBI team member will conduct training for the two Project HOPE team members to ensure that the piloting approach is consistent in the two countries. Project HOPE staff will report back on 1) the experience using the newly developed ethics tool along with suggestions for how to revise the tool if needed, 2) training that could occur around the tool's implementation in other regions, and 3) the summary of findings from use of the tool as well as suggestions for future steps to address findings.

Activities 4 - Summarize findings and recommendations and Activity 5 - Revise Tool for the Assessment of Ethical TB Patient Management

These activities will be carried out in the next few months and will include a report on the process of using the tool, feedback from the NTP participants on the tool's use and recommendations for future versions of the tool as well as suggestions for future steps based on the findings from the tool's use and revision of the tool for use in other countries.

7.1.3 Challenges

The premise of assessing ethical practices is in itself a sensitive issue. The ground staff have expressed that the delay in getting buy in for this project is due to working with NTP staff to understand that the purpose this project is to pilot test an ethics tool and not to assess actual ethical practices of the TB program. The various levels of approvals have also posed a challenge in that communication with various levels of USAID and country level staff has been needed to proceed with this project.

7.1.4 Next steps/ Implications for Year 2 Activities

The follow on to this activity was not approved for year 2 as the instrument was not field tested and thus no real experience on the use of the self assessment to provide grounds for an affirmative decision. It is anticipated that this experience and outcome data will be available in March 2012 and may provide a basis for additional activity in year 3.

7.1.5 Dissemination of Lessons Learned

We will create a brief report on the process of developing this ethics tools and comment on the opportunities and challenges in pilot-testing it. This can be used to inform future activities related to ethics at the central and local levels.

7.2 Activity 7.3: Explore national insurance programs where TB can be included to motivate/incentivize universal coverage

TB CARE	II
Project Code	7.3.1 and 7.3.2 (combined)
Project Year	1
Lead Partner	URC
Coalition Partners	WHO
Other partners	
Total budgeted amount	$75,813
Project Start Date	
Project End Date	September 30, 2011

7.2.1 Progress Against Expected Outcomes

The TB CARE II team met the expected outcome of exploring potential for building on national insurance programs to increase universal coverage of TB services and is in the process of completing the country case studies.

7.2.2 Activities and Results

Activity 1. Develop Draft Protocol: At present, there is little information or consensus on how best to integrate TB into national health insurance programs. Some of the high burden countries already have national health plans providing various levels of coverage (universal coverage, coverage for government employees only, insurance schemes for factory workers) and/or private medical insurance schemes. URC as lead partner for the activity conducted a desk review and analysis of how well TB is currently included in the service delivery package in national health insurance programs, as well as situations where insurance schemes exist but TB services are not yet included. The general trend from the studies reviewed indicates that coverage of TB under national insurance leads to a positive impact and increased patient access to TB services (although data is more widely available for developed rather than TB high-burden countries). A key preliminarily conclusion that can be drawn from the studies reviewed is that TB services need to be fully integrated into the basic health package covered under the insurance schemes. Health systems barriers (related to drug supply, lack of qualified personnel, data collection and use, etc) also inhibit the impact of the insurance program. The review also examined plans underway or in place in TB high burden countries to implement or extend the reach of various insurance models. With a few exceptions, TB control is not a central feature of national plans for extending insurance coverage and there is little available information on linkages between TB strategic objectives and development/ implementation of national insurance programs.

Based on the desk review, URC developed a draft assessment protocol for the country case studies aimed at describing the characteristics of national policy reforms and UHC packages; examining the implications for TB control programs, inputs, services; identifying the additional health system requirements in terms of human resources, infrastructure and equipment/ supplies, and capacity building; assessing the implications for communities most affected by TB, and for TB patients in terms of awareness, access, and quality of care; identifying current programs underway to improve health service delivery; outlining the potential for universal health care to overcome specific bottlenecks for TB diagnosis and care; and identifying the opportunities for linking health insurance programs to other efforts to reduce TB service delays, integrate private providers (PPM), and achieve other TB program targets. Interview guides were developed for structured interviews with stakeholders at the national level (NTP manager); insurance providers/ managers; implementation level, and community level. The desk review and draft protocol were completed in June 2011.

Activity 2. Consensus building: Based on discussion with USAID, URC decided to implement the case studies in three countries- India, Thailand, and the Philippines. In each country, key stakeholders were identified and the protocol and questionnaires were shared for review and revision. This activity is ongoing as of the end of the reporting period.

Activity 3. Conduct case studies: As of the end of the reporting period, data collection had commenced in Thailand, with data collection expected to start in the Philippines and India early in Q1, Y2.
Activity 4. Draft integrated report: This will take place in December 2011.

7.2.3 Challenges

URC experienced several delays related to time required to obtain necessary approvals for implementing the assessments at the country level and identify relevant stakeholders. Some time was spent, for example, revising the questionnaires and approach in India, based on initial feedback from national stakeholders and in order to identify the key insurance schemes to target with the assessment. A secondary challenge the activity has faced is the lack of existing information or awareness regarding methods to increase utilization of insurance mechanisms to expand TB coverage; in initial finding is that advocacy is needed to raise the debate among national stakeholders who may not have previously addressed TB within insurance programs.

The activity was also unable to incorporate the participation of the WHO as intended, due to challenges related to formalizing WHO's partner agreement with the TB CARE II project. URC took on the additional effort to complete the desk review and protocols without the planned WHO support.

7.2.4 Next steps/ Implications for Year 2 Activities

In PY2, TB CARE II will work with NHI schemes to develop interventions that result in improved access to TB services through reducing out of pocket costs to patients.

7.2.5 Dissemination of Lessons Learned

The TB CARE team will present the key findings in each country at a stakeholders' workshop which will include NTP, insurance managers, MOH, MOF, and other health policy makers and stakeholders.

8 ADMINISTRATION OF CORE ACTIVITIES

8.1 Overview of Administrative Activities

As part of year 1 start-up, the TB CARE II management team worked with the core and implementing partners to establish clear lines of communication and ensure that processes for reporting, development of workplans, and participation in activity planning were well developed and clearly understood by all. There has been a necessary period of learning involved in setting up processes among the team members, and during the development of the Year 2 core activity plan, some partners communicated that they had some trouble understanding what was expected of them regarding participation in the planning process and development of activity plans according to the themes set out by USAID. In response to this, following the Year 2 workplan development, the TB CARE II senior management and PMSG set out to review and revise the project's management structure in collaboration with USAID to provide an updated, comprehensive overview of the roles and responsibilities of all team members (including the role of the Senior Technical Advisory Committee), lines of communication, and key management activities. This revised structure will be shared with partners for their feedback and should assist to streamline management functions for Year 2.

The project experienced challenges during the course of the year related to formalizing sub-agreements with consortium partners WHO, BEA, and Dartmouth University. The process for securing the formal sub-agreements was initiated soon after project start up, but due to the lengthy procedures involved, the sub-agreements were not formalized by the end of the reporting year. Because of this, it was difficult for the activity teams to collaborate with these partners as planned. This was especially the case for WHO, who was an intended sub-partner on several of the core activities. In these cases, the lead partner on the activity provided the additional effort to ensure work was completed.

In the end of June 2011, the project's Monitoring and Evaluation Officer, Pankaj Sadaphal, discontinued work with the project. Jhpiego began sourcing for a replacement candidate for the M&E Officer but this position remained unfilled at the end of the reporting period. URC provided in house personnel in the interim to ensure that M&E functions were covered.

8.2 Environmental Monitoring and Mitigation Activities

The TB CARE II consortium recognizes the need to ensure that activities conducted under the auspices of the project are designed to provide maximum good to the countries where they are implemented and to the extent possible, minimize any negative environmental consequences.

In quarter 1 and 2, TB CARE II worked with USAID to develop a process for environmental screening and mitigation for the consortium to follow for all activities at the country and core levels. The process was communicated to all team members and outlined the environmental responses which should be followed prior to the start up of new activities and during activity implementation.

URC worked with the lead partners for the core activities to complete an environmental screening form for the Year 1 activities. No activities in the workplan were identified as carrying potential environmental threats, and as a result an Environmental Monitoring and Mitigation Plan was not developed for the core workplan.